DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-015497
Date Inspected: 06-Jul-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 600
OSM Departure Time: 1500
Location: Job Site

CWI Name: Bernard Docena, Steve McConnell, Jesse Cayabyab

CWI Present:					☑ **Yes**	☐ **No**	
Inspected CWI report:	☑ **Yes**	☐ **No**	☐ **N/A**	**Rod Oven in Use:**	☑ **Yes**	☐ **No**	☐ **N/A**
Electrode to specification:	☑ **Yes**	☐ **No**	☐ **N/A**	**Weld Procedures Followed:**	☑ **Yes**	☐ **No**	☐ **N/A**
Qualified Welders:	☑ **Yes**	☐ **No**	☐ **N/A**	**Verified Joint Fit-up:**	☑ **Yes**	☐ **No**	☐ **N/A**
Approved Drawings:	☑ **Yes**	☐ **No**	☐ **N/A**	**Approved WPS:**	☑ **Yes**	☐ **No**	☐ **N/A**
				Delayed / Cancelled:	☐ **Yes**	☑ **No**	☐ **N/A**

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified 4E/5E-C, 4W/5W, 3E/4E, and the following observations were made:

4E/5E-C

The QA Inspector randomly observed the ABF welder Song Tao Hunag had previously started the induction heating blankets on the inside of OBG to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF welder to be utilizing the semi automated flux cored arc welding (FCAW) for the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Bernard Docena set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042A The QA Inspector randomly observed the FCAW parameters were 251 Amps, 23.6 Volts and a travel speed of 290mm/min. The QA Inspector randomly observed the ABF welder identified above continue the FCAW cover passes on approximately 4000mm of weld segment C1 in the am. The QA Inspector noted the weld segment C1 was completed on this date. The QA Inspector noted the remainder of the QA Inspectors shift, the ABF welders were moving and setting up to perform welding at weld segment C2.

4W/5W-D

Upon the arrival of the QA Inspector, the ABF welders James Zhen and Xiao Jian Wan were setting up to complete the above identified weld joint. The QA Inspector noted the above identified weld joint was previously

welded with submerged arc welding, except for approximately 1 meter on the ends where the SAW machine cannot reach. The QA Inspector noted the welds were previously started on Friday 7/2/10 and approximately 50% complete upon the arrival of the QA Inspector in the AM. The QA Inspector randomly observed the ABF welder James Zhen utilizing shielded metal arc welding (SMAW) with 1/8" electrode and 127 Amps. The QA Inspector randomly observed the ABF welder Xiao Jian Wan was performing flux cored arc welding (FCAW) in weld segment A1 with 247 Amps, 23.5 Volts and a travel speed of 280mm/min. The QA Inspector randomly observed the FCAW parameters to be in general compliance with the contract requirements. The QA Inspector noted the welding was in process at the end of the QA Inspectors shift on the job site.

3E/4E-D

Upon the arrival of the QA Inspector it was noted the ABF welder Fred Kaddu was on site to perform excavations and weld repairs from previously rejected and indicated weld defects. The QA Inspector randomly observed the SE QC Inspector Jesse Cayabyab was present at the time of the excavations. The QA Inspector randomly observed the ABF welder Fred Kaddu begin excavating the ultrasonic testing (UT) reject. The QA Inspector randomly observed the QC Inspector performed magnetic particle testing of the excavated area. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector noted the Y dimension of the excavation was Y=0mm-205mm. The QA Inspector noted the dimensions of the excavations were 205mm X 20mm X 10mm deep (pictured below). The QA Inspector randomly observed the ABF welder begin welding the shielded metal arc welding (SMAW) repair of the excavation identified above. The QA Inspector randomly observed the ABF welder utilizing 1/8" E7018 Low Hydrogen electrodes with 128 Amps. The QA Inspector noted the SMAW parameters appeared to be in general compliance with ABF-WPS-D1.5-1000-Repair. The QA Inspector noted the above identified weld joint has 13 total weld repairs.

Summary of Conversations:

No pertinant conversation noted.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer